



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,265	06/27/2003	Masahiro Nambu	KIN86USA	8115
270	7590	07/26/2005	EXAMINER	
HOWSON AND HOWSON ONE SPRING HOUSE CORPORATION CENTER BOX 457 321 NORRISTOWN ROAD SPRING HOUSE, PA 19477			KRISHNAMURTHY, RAMESH	
			ART UNIT	PAPER NUMBER
			3753	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Tata

Office Action Summary	Application No.	Applicant(s)	
	10/609,265	NAMBU, MASAHIRO	
	Examiner	Art Unit	
	Ramesh Krishnamurthy	3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3753

This office action is responsive to communications filed 07/11/05.

Claims 1 – 5 are pending.

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 – 3 are rejected under 35 U.S.C. 102(b) as being anticipated by McMillin et al. (US 6,333,272).

McMillin et al. discloses (see for example, Fig. 3) a system for dividing gas flow, wherein gas a primary flow path (from (28)) is divided into a plurality of secondary flow paths (12, 14) connected to inlets of a single processing chamber (10), one of said secondary flow paths (either 12 or 14) being fully opened and the flow rate of gas in each of said secondary flow paths being related to the flow rate of gas in each other one of said secondary flow paths by a predetermined ratio, the system comprising: plurality of mass flow controllers ((42,44) and (34,36)), there being one said mass flow controllers arranged to control flow in each said secondary flow path; and a common controller (40) connected to all of said mass flow controllers; and a sensor (42 or 34) arranged to measure the flow rate of gas in said fully opened secondary flow path, said sensor being connected to said common controller, and providing to said common controller a feedback-signal representing the flow rate of gas in said fully opened secondary flow path; the ratio of the flow rate of in each other one of said secondary flow paths relative the flow rate of in said fully opened secondary flow path being set at a value of 1 less,

Art Unit: 3753

and said common controller being responsive to said feedback signal and delivering, to the mass flow controller in each other one of said secondary flow paths, a set signal for controlling the flow therein, said set signal being dependent on said feedback signal and being obtained by multiplying the measured flow rate in said fully opened secondary flow path by the predetermined ratio for the flow rates in said fully opened secondary flow path and said other one of said secondary flow paths (Col. 5, line 65 – Col. 6, line 46). The Mass flow controllers in McMillin et al. are taken here to include all known MFCs including the well-known pressure sensing type.

It is noted that the separate flow set point signals sent to each mass flow controller is derived from the user specified set point which here is taken to be equivalent to pre-determined constant ratio. Also, McMillin et al. discloses at Col. 4, lines 15 – 20, that it is known to employ multiple delivery to multiple zones of the chamber. Thus use of more than two delivery lines to the process chamber is inherent to the system disclosed in McMillin et al. and the specific split ratio amongst the secondary flow paths is controlled based on the user specified set points with the configuration recited in claim 5 representing a particular choice of set points.

Response to Arguments

3. Applicant's arguments filed 07/11/05 have been fully considered but they are not persuasive. Applicant is arguing that in Applicant's invention the detected flow rate is multiplied by a desired set point and the resulting signal is supplied to the mass flow controllers as a set signal. Clearly the set signal to each mass flow controller is therefore reflective of the user desired set point and that is indeed the case in McMillin

et al. wherein the set point supplied to each mass flow controller is dictated by combining the detected mass flow rate and the user specified set/split points. The predetermined ratio recited in the claims being the same as the split set point set by user in McMillin et al. and the means for generating a set signal is therefore inherent to McMillin et al. See Col. 6, lines 31 – 34. Furthermore, it is noted that the applicant's claim is of the product by process type and thus is not limited to the manipulations of the recited steps but only to the structure implied by the steps. See MPEP § 2113.

4. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

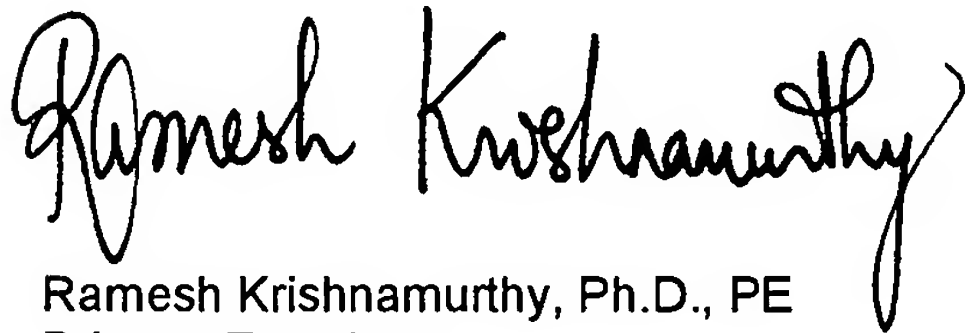
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 3753

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramesh Krishnamurthy whose telephone number is (571) 272 – 4914. The examiner can normally be reached on Monday - Friday from 10:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene L. Mancene, can be reached on (571) 272 – 4930. The fax phone number for the organization where this application or proceeding is assigned is (571) 273 – 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink that reads "Ramesh Krishnamurthy". The signature is fluid and cursive, with the first name "Ramesh" and last name "Krishnamurthy" clearly distinguishable.

Ramesh Krishnamurthy, Ph.D., PE
Primary Examiner
Art Unit 3753